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ABSTRACT

Results of a statistical investigation relating teacher characteristics to ten dimensions of their self-concept and motivation are reported. The Self-Concept and Motivation Inventory for Teachers (SCAMINT) was used to compare the two sets of data. Specific findings for the characteristics of teacher sex, age, level of instructional duties, and teaching experience are presented, as are incidental findings relating to other settings. Implications of the study for the identification of teaching ability, administrator style, and role differentiation are noted. It is urged that more attention be paid to self-concept and motivation as focal points for promoting school change. (MJB)

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Focusing on Teachers' Self-Concept and Motivation

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Focusing on Teachers' Self-Concept and Motivation

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ABSTRACT

An investigation was made between teacher characteristics and various dimensions of their self-concept and motivation. Involved were several field studies and one doctoral dissertation in educational administration.

Statistical techniques included MANOVA, Canonical Variance, and Factor Analysis. Significant differences were found between the characteristics of sex, age, level, and experience in the various samples which totaled 572. Also included was a sample of outstanding junior and senior high school teachers who, when compared with a randomly drawn sample of teachers with identical characteristics, scored significantly higher.

In terms of the ten sub-scales measured, the factors of "personal investment" and "pupils" were the most significant. For example, the profile analyses of the sub-scales indicated that, regardless of sex, age, level, or experience, the group of outstanding teachers excelled in all areas.

The assessment of teacher self-concept and motivation, especially as a component of self-evaluation, looms as a vital point of entry for an awareness or understanding of self-concept in children. Most important, the utilization of teacher talent, as evidenced by the profiles of outstanding teachers, is crucial in the formulation of staff education designs.

INTRODUCTION

In the day to day activities of teachers, what impact does administration, pupils, and parents have on the teachers' self-concept and motivation? Moreover, what significant patterns occur among the teachers' personal characteristics of sex, age, level, and years of experience? One may also ask: why this particular concern and research probe?

First, within the decade of the sixties, there appeared to be a deepening concern with the idea that self-concept and motivation were intimately associated with school success at all levels. However, Wylie's (1961) comprehensive criticism of the self-concept literature included attacks on the vagueness of the current theoretical formulations and the inappropriateness of the construct validity used in self-concept measuring instruments.

Second, and more recently, emphasis upon the aforesaid global variables has become known as the "humanistic movement" (Combs, et al, 1971). An inspection and analysis of the latter movement brings out dominant themes such as that man is rational; that he is purposeful and aware of himself; and that he is directing his future via his aspirations. Herein, one detects a causal relationship: all behavior apparently depends on the individual's framework of reference; namely, that at any given moment, he will behave in the manner in which he perceives a situation or himself. Therefore, in view of these existential or phenomenological aspects, especially in view of the teacher's self-concept and

motivation, it is this personal framework of reference that is crucial.

Finally, while considerable research and effort has been directed at enhancing self-concept and motivation of students, it is not the intent of this writer to elaborate any further on the literature; excellent reviews are provided by Hamachek (1971), Purkey (1970), and others. In passing, however, it should be noted that there has been little reported scientific evidence to support theories of self-concept and motivation in relation to teachers. Most important, it seems reasonable to assume that teachers should know themselves and their working environment if they are to effect significant changes in the self-concept and motivation of their students.

METHOD

Instrumentation: The Self-Concept and Motivation Inventory for Teachers (SCAMINT)

Some pertinent criteria which were used in the formulation of the items to measure self-concept were that: 1) the inventory must be related to school climate coupled with school-related self-concept and motivation rather than general self-concept, 2) the invasion of privacy and negative after-effects of self-awareness must be minimized, and 3) fakeability and defensiveness should be reduced.

Some Pertinent Definitions[1]

In order to gain a better understanding of the terms used in the general framework of SCAMINT, the following definitions are provided below.

Immediate and Intrinsic Orientation involve those items which describe the types of school activities encountered by the teacher. Both self-adequacy and role expectations, components of self-concept, include: evaluated competition, tasks, projects, teaching activity, discovery, creativity, and the development and growth of skills in the art of teaching.

Fulfillment and Extrinsic Orientation contain items which reflect behavior that strives to fulfill roles. This latency or process of becoming is characterized by the qualities of personal investment and goal needs—in reality, motivation. The roles of aspiration, cooperation, conformity, responsibility, acceptance, and praise are examples of this extrinsic behavior.

Sample Items

The first cluster of items for the row of "Administration" appears in the matrix as intersecting with the four column factors in the following manner:

Self-Adequacy	Personal Investment	Role Expectations	Goal Needs	Areas of Application in the School (Rows)
(Items)				
1	2	25	26	Administration
3	4	27	28	

Since these eight items belong to the cluster of Administration, the same technique is repeated five more times for the corresponding row clusters of Pupils' Parents, Other Teachers, Activity Climate, Pupils, and Academic Activity. In this aforesaid fashion, forty-eight items of the factorial matrix are built.

For the purpose of illustrating the type of items used, one is taken from each row with the appropriate column factor appearing in parenthesis at the end of the item.

Administration (Item 3) How would you feel if your principal and assistant principal made a surprise visit to observe your class? (Self-Adequacy; i.e., Items 1, 3, 5, 7, etc. to 23.)

Pupils' Parents (Item 6) How would you feel if the parents of one of your pupils thanked you for helping their child? (Personal Investment; i.e., Items 2, 4, 6, 8, etc. to 24.)

Other Teachers (Item 33) How would you feel if your fellow teachers insisted that you be the first one to try out a new teaching method in your classroom? (Role Expectations; i.e., Items 25, 27, 29, 31, etc. to 47.)

Activity Climate (Item 40) How would you feel if you thought you had prepared your class the best of any for a statewide evaluation? (Goal Needs; i.e., Items 26, 28, 30, 32, etc. to 48.)

Pupils (Item 17) How would you feel if you found that you could give a great deal of help to one of your pupils in a subject outside of your field? (Self-Adequacy; i.e., Item 3.)

Academic Activity (Item 22) How would you feel if you were involved in a comprehensive graduate program in your field? (Personal Investment; i.e., Item 6.)

The above sample items were regarded as the dependent or criterion variables for the research projects. In the next section, the author describes the method of obtaining data from teachers, certain characteristics or predictor variables, and how they responded to the items on the inventory.

The Response System and Scoring

A "Personal Data Sheet" requested information pertaining to certain teacher characteristics as sex, age, level of teaching, and length of experience from all the participating teachers in the various samples.

Teachers responded to the items on a stanine scale ranging from 1, "if you would feel absolutely deflated" to 9, "if you would feel absolutely elated." In essence, as may be noted from the sample items, the summary answer sheet for SCAMINT was a grid layout, which was based on the Greco-Latin square design of the inventory itself.

Since each item is worth a maximum value of 9, and each of the four columns has 12 items, the highest possible score for any one column is 108, or 432 for the four columns. Then each row has eight items for a maximum score of 72, and the total for six rows also yields a total of 432.

Reliability and Validity

The Kuder-Richardson Method of estimating the internal consistency of SCAMINT for the universe of N-572 revealed a correlation coefficient of .83 for the total inventory.

Employing the multiple-group method of factor analysis, with both oblique and orthogonal solutions, a maximum validity loading of .91 was obtained. A vector analysis of the factor loadings illustrated that two groups of item clusters were related to the criteria variables of Personal Investment and Self-Adequacy.

Sampling Procedures and Analyses

This endeavor involved one doctoral dissertation, four field studies, and one independent research project, all in the area of educational administration. Under the direction of the writer, each pilot study was set in a different type of academic environment to determine whether or not relationships existed between teachers' self-concept and motivation and the designated characteristics.

With the exception of one sample conducted in an inner-city setting of a large city in a nearby state, the population samples were drawn from both rural and urban communities of the Central Minnesota area, on a city, county, or township basis. The techniques of both random and stratified sampling were involved, and one stratified sample involved junior and senior high school teachers selected from the Minneapolis-St. Paul area. These were unique teachers because, in each of the participating buildings, they were selected by the school counselors as the outstanding teachers in that particular setting. In one case, the then "Minnesota Teacher of the Year" was also included.

The analyses included 1) Analysis of Means, 2) Variance, 3) Can-

onical Correlation, 4) Factor Analysis, and 5) Multiple t Tests.

RESULTS

The findings reported are a composite analysis of the sub-cluster scores on ten variables for the total population of N-572. Moreover, there were, from a 48 item version of MANOVA, a great number of first and second order interactions. However, space does not permit their description here, nor the presentation of the numerous tables and figures. Rather, the main effects from the sub-cluster scores from the two kinds of characteristics analyses are used.

Findings Related to Teacher Characteristics

First, attention should be focused on accounting for the variance due to the predictor variables versus the criterion variables. Canonical Correlation revealed that the characteristic of Sex accounted for 32.91% of the variance; Age, 21.23%; and Level 40.43%. Moreover, the characteristic of Experience (i.e., from the Sex x Experience x Level design), indicated a variance of 21.23%.

Second, the sub-cluster scores reported on the criterion variables of SCAMINT are the main total scores for the four columns and the six rows, with a total inventory score also included. In addition, the yield of significant differences noted for the column variables of Personal Investment and Self-Adequacy (i.e., totals of 41 and 30 respectively) served as an internal cross-validation index of SCAMINT. The latter fact is especially important when one remembers that loadings of .91 for Personal Investment and .62 for Self-Adequacy had been obtained from factor analysis.

Other specific findings for each of the characteristics are

given below.

1. The Characteristic of Sex.

The only significant difference was on the column score of Personal Investment, and the male scored higher than the female.[2]

2. The Characteristic of Age.

Of all four characteristics, Age revealed that there were significant differences on the majority of column and row sub-cluster mean scores. The two exceptions were Personal Investment and Administration. Those teachers who are 39 years and over showed the highest scores in Self-Adequacy, Role Expectations, and Other Teachers; in comparison with other scores, they approximate or almost equal the 21 to 29 age group.

The 30 to 38 age category had the lowest mean scores on all ten sub-clusters. In no case did these teachers exceed either the younger or the older groups. The drop in mean scores for the 30 to 38 age interval may signal a time of uncertainty, of certain pressures, or of conflicting values converging on the individual.[3]

3. The Characteristic of Level.

The senior high school teachers had the highest sub-cluster score on Personal Investment and equaled the junior high school teachers on scores relating to Administration. Having already examined two other characteristics, and noting that there was also a first-order interaction effect on Personal Investment for Age x Level, one can infer that it is the male, 21-29 years of age, who is scoring highest on the secondary level.

There is close agreement between junior and senior high school teachers and, apparently, the higher the teaching level, the higher the academic self-concept and motivation.

4. The Characteristic of Experience.

The most interesting finding here involves those teachers who have more than 18 years of experience. These individuals exhibit the highest sub-cluster scores for the column and row variables of Self-Adequacy, Goal Needs, and Academic Climate. Moreover, for the column variable of Personal Investment, those teachers in the 1 to 6 years interval had the highest mean scores.

Closely paralleling the findings reported for the characteristic of Age, those teachers in the 13 to 18 years interval had the lowest total mean score on the inventory.

An interesting similarity can be made by comparing the total mean scores between the Age interval of 30 to 38 (i.e., 279.82) and that of the Experience interval of 13 to 18 years (i.e., 279.02); the difference between those two sets of scores is merely .80.

Other Findings

In addition to those findings related to teacher characteristics,

the use of SCAMINT yielded results in other settings. For example, it was discovered that:

1. The one study conducted outside of Minnesota involved a comparison of faculty self-concept and motivation in an urban middle class high school with an inner-city minority high school. It was found that the middle class urban school's mean scores, on all ten criterion variables, were higher than the mean scores of the minority school.[4]

2. In an attempt to find relationships between teacher characteristics and the criterion variables of SCAMINT, a stratified sample of 19 junior and senior high school teachers were selected from the Minneapolis-St. Paul area. These were highly unique teachers because, in each building, they were chosen by the school counselors as <u>the</u> outstanding teachers in that particular setting. In one case, the "Minnesota Teacher of the Year" was also included.

The findings relevant to outstanding teachers are provided below.

2.1 The results indicate that on the factors of Personal Investment and Goal Needs, both components of Motivation, these teachers scored highest. In other words, regardless of the characteristic, these outstanding teachers scored highest on the convergent motivational factors. For example, the "Outstanding Teachers" had mean scores of 84.8 for Personal Investment and 84.2 for Goal Needs, while, for the total population of N=572, the mean scores were 66.5 for Personal Investment and 80.1 on Goal Needs. (Significant at .05).

2.2 The next procedure was to compare the mean sub-cluster scores with another sample drawn from the total population of N=572. In order to make this comparison, a random sample of 19 teachers, with identical characteristics and numbers in terms

of Sex, Age, Level, and Experience, was generated.

In this particular comparison, the Outstanding Teachers were above the stanine five mean on all ten sub-scales. Personal Investment represented the highest stanine value reached and Self-Adequacy the lowest. In contrast, the randomly selected group stayed within the average stanine range in eight of the sub-scales, and, for Goal Needs and Academic Activity, fell below the normal range of stanine five.

2.3 An analysis of means of the Outstanding Teachers versus the randomly selected group indicated that the former exceeded the latter in all cases. (Significant at .05.)

2.4 The most interesting contrasts occur between comparisons of Total Scores for the characteristics of Age and Experience. Whereas the particular intervals (i.e., of Age 30-3[illegible]nd 7-12 years Experience) represent some of the lowes[illegible]cores in the population of N=572, the mean scores of Outstanding Teachers for the latter intervals are significantly higher than the population mean scores.

The aforesaid results from SCAMINT research present several implications for the world of education, and these are considered in the final section.

SUMMARY AND CONCLUSIONS

In retrospect, the underlying theme of the global variables of academic self-concept and motivation was essentially the manner in which a teacher perceived her or his role. Since the more general self-concept also involved Self-Adequacy and Role Expectations, the items of SCAMINT attempted to reflect or sample the sum of a teacher's attitudes, perceptions, ideas, or feelings about his role or work in the school.

Other items, concurrent with the column variables of Self-Adequacy and Role Expectations, involved the variables of Personal Investment and Goal Needs. These latter two factors comprised the more general idea of academic motivation which included 1) the expressed need of teachers to achieve their goals with an element of cooperative adjustment toward the school and the community, and 2) the commitment that one has for the profession.

It was believed that overlapping content or interlocking variables, which could contaminate the content of the SCAMINT items, were balanced or controlled by the factorial matrix employed. The individual items within the matrix were written so as to synthesize the underlying row and column factors, thus permitting a total of ten descriptive subclusters and scores.

In interpreting the findings related to characteristics, there are several implications which immediately surface.

First, the emphasis on youthful teachers for their enthusiasm and zest may be well justified. However, there is growing evidence that younger teachers do not hold a monopoly on a high Personal Investment or goals to a school district. Rather, those older teachers, especially those over 39 years of age, may exhibit the same high enthusiasm and commitment in their work! In fact, the average age interval had the highest total mean score, if only by the slim margin of .91 over those in the 21-29 years of age category (although this difference was not significant).

Second, the characteristic of Experience is apparently related to Age. Increased longevity, purely in terms of the sub-cluster scores, and only to a point, brings a corresponding decline in scores. The drop is evident in the 13-18 years interval. Apparently this nadir signals the end of those life forces or circumstances that cause the decline, because there is a sudden rise in scores beyond 18 years of teaching.

One suspects that the exigencies and pressures of everyday life affect the motivation of average teachers during the critical age interval of 13-18 years.

Third, of all characteristics studied, especially in the general population, there was only one significant difference noted between female and male. That difference was in favor of the male on the sub-cluster score of Personal Investment. From the vantage point of Self-Concept and Motivation, one senses the growing impact of the salutary effects of the Feminist Movement. For example, about seven years ago, in preliminary testing of SCAMINT, the author discovered that the male registered higher, more significant mean scores than did the female on several of the sub-cluster indices--especially Self-Adequacy.

Fourth, the characteristic of Level also produced a small yield of significant differences. These were Personal Investment, Administration, and Pupils' Parents. In all three latter instances, the Elementary Level scored the lowest, while the differences between the Junior and Senior High Level were practically non-existent. However, in all other sub-clusters, the mean scores among the three levels were close. Since the parental interest seems to be natural for the child-centered Elementary Level, it is refreshing to detect that the so-called "book-oriented" Secondary Level also shows a concern for "Pupils' Parents." Undoubtedly, many myths have been built or fostered concerning the exclusive domains of these three levels, and the accompanying ego involvement that goes with each. If articulation is ever to become a reality, then the three Levels cannot be treated as though they were various layers of a cake, one piled upon the next.

Finally, the implications that arise from the replicated study of Outstanding Teachers is, perhaps, the most dramatic of all the

findings. There is the dramatic fact that, regardless of the particular characteristic, this group exhibited the highest scores on aspects of Motivation, Pupils, and Administration. If teaching ability can be reflected in various indices of SCAMINT, then the profile of the Outstanding Teacher can be demonstrated.

In these crises-filled days of confrontation, frustration, declining enrollments, and strikes, the hour may be at hand for the maximum utilization of teacher talent. It is a well-known fact that over the years, unless the superior, dedicated teachers are recognized and challenged, they move on to administration, leave the profession, or simply do only what is necessary to get by. Fortunately, there are imaginative administrators who do give leadership roles or shared decision-making tasks to utilize the great talents of these individuals.

More crucial, perhaps, in terms of the average dedicated teacher, is the need for the administrator to provide a supportive climate for his staff. It can be inferred from the various findings of SCAMINT research that there is a causal relationship between Personal Investment and school climate. In turn, the high morale generated by a favorable support climate has the quality of spontaneity: it permeates throughout the entire school and ultimately affects the quality of education being given to the pupils. How the school administrator behaves toward his staff—indeed, his very style—may be a crucial element in the enhancement of Goals and enthusiasm or, conversely—the general erosion of Motivation.

There is also the implication that, while the characteristics (i.e., sex, age, etc.) of teachers cannot be altered, teaching roles can be differentiated to improve the teacher-pupil learning process. Hence, it is the imaginative, resourceful administrator who knows and

uses the best features of staff utilization so that roles are assigned according to teachers' strengths and interests.

In conclusion, there is growing evidence that as a point of entry for school change, teacher education programs, administrators, and teachers must become aware of the dynamics inherent in Self-Concept and Motivation. Programs, innovations, or intervention techniques, that stress teacher self-evaluation would, in the long run, be far more effective in changing perceptions than prescribing rigid procedures.

FOOTNOTES

[1]Many of these definitions have their theoretical origins in the writings of C. H. Cooley, George H. Mead, Kurt Lewin, and Kimball Young.

[2]Florence M. Anderson, A Descriptive Study of Teacher Self-Concept and Motivation Associated with Academic Climate and Their Relationship to Certain Personal Characteristics. Unpublished Doctoral Dissertation, University of Minnesota, August, 1975, p. 310. Dr. Anderson examined the two broad concepts of teacher self-concept and motivation in the academic and social climate in which teachers interacted. Her design was Ex-Post Facto utilizing a one-test only situation.

[3]Harold W. Hines, A Study of Teacher Self-Concept and Motivation in a Middle Class Small City High School. Unpublished Field Study, St. Cloud State University, 1973, p. 403. This study involved pre- and post-test measurements for the purpose of assessing the relationship of teacher self-concept and motivation with administrative style. See also Lyndon J. Sonju, A Study of the Academic Self-Concept and Motivation of a Suburban Middle Class High School. Unpublished Field Study, St. Cloud State University, 1975, p. 279.

[4]For an interesting contrast, see David C. Groth, A Comparison of Teacher Self-Concept and Motivation in an Urban High School with an Inner-City Minority High School. Unpublished Field Study, St. Cloud State University, 1973, p. 370, and Robert Olsen, A Study of Teacher Self-Concept and Its Relationship to Social Class. Unpublished Field Study, St. Cloud State University, 1973, p. 341. Both studies utilized a one-test only design.

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March 2, 1978

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